Ordering number: EN3804A

Monolithic Linear IC

No.3804A

SANYO

LA7217,7217M

Synchronizing Signal Separator with AFC and Sync Detector

The LA7217 and 7217M are synchronizing signal separator ICs with AFC and AFC Lock detector designed to be used in video equipments such as VCR and TV sets. VCO with ceramic oscillator and PLL horizontal sync detector provide an adjust-free, precision sync detection system.

Functions

- Horizontal sync separation
- Vertical sync separation
- VCO ($32f_H$)
- AFC
- Sync signal detection

Features

- Use of a ceramic oscillator requires no adjustment
- Negative polarity output
- High impedance video signal input pin
- 5 V supply voltage

Maximum Ratings at Ta = 25°C

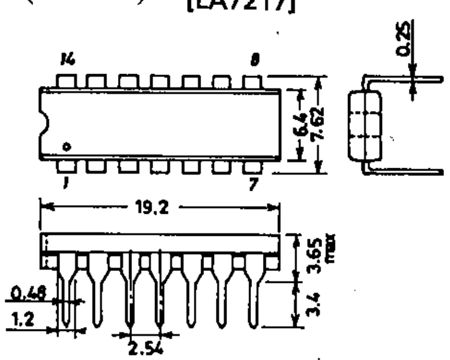
				unit
Maximum Supply Voltage	V_{CC} max	Quiescent time	7	V
Allowable Power Dissipation	Pd max		150	mW
Operating Temperature	Topr		-15 to +65	°C
Storage Temperature	Tstg		-40 to +125	°C

Operating Conditions at Ta = 25°C

			unit
Recommended Supply Voltage	V_{CC}	5.0	V
Operating Voltage Range	V_{CC} op	4.5 to 5.5	V

Package Dimensions 3003A

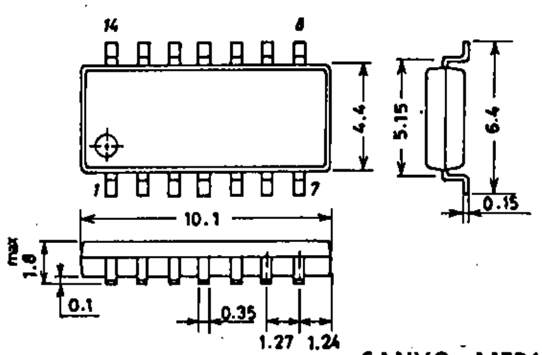
(unit: mm) [LA7217]



SANYO : DIP14

Package Dimensions 3034A

(unit: mm) [LA7217M]

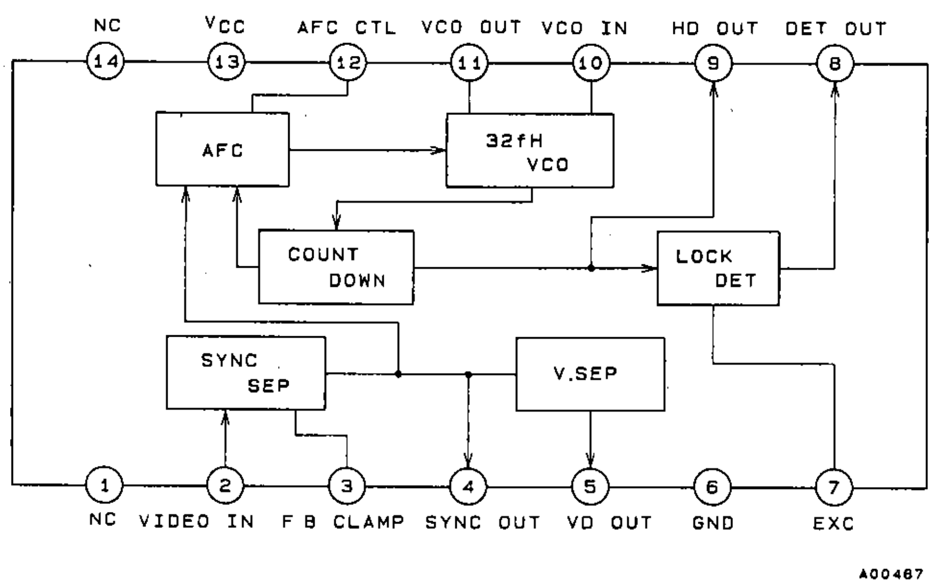


SANYO : MFP14

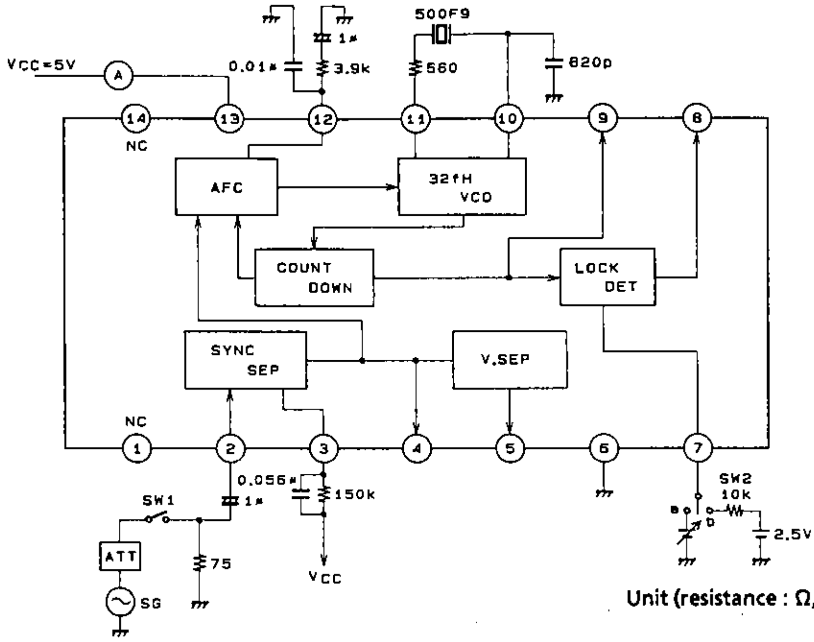
Operating Characteristics at Ta = 25°C, V_{CC} = 5 V

			min	typ	max	unit
Current Dissipation	I_{CC}	Standard color bar input	4.9	7	9.1	mA
Minimum Separable Input Voltage	V_I min		-15	-11	-8	dB
HD Output Delay Time	T_{HD}	From pin 2 to pin 9	0.1	0.5	0.9	μs
HD Output Pulse Width	T_{HW}		3.6	4.0	4.4	μs
VD Output Delay Time	T_{VD}	From pin 2 to pin 5	9	13	17	μs
VD Output Pulse Width	T_{VW}		0.16	0.21	0.26	ms
Free-running Frequency	FO	SW1 off	15.4	15.75	16.1	kHz
Capture Range 1	F_{CH}	Judgment by comparison of pin 9 with pin 2	300	500		Hz
Capture Range 2	F_{CL}	Judgment by comparison of pin 9 with pin 2	1000	1500		Hz
SYNC Out, H Voltage	V_{SH}	Level on pin 4	3.9	4.2		V
SYNC Out, L Voltage	V_{SL}	Level on pin 4		0.8	1.0	V
HD Out, H Voltage	V_{HH}	Level on pin 9	3.9	4.2		V
HD Out, L Voltage	V_{HL}	Level on pin 9		0.8	1.0	V
VD Out, H Voltage	V_{VH}	Level on pin 5	3.9	4.2		V
VD Out, L Voltage	V_{VL}	Level on pin 5		0.8	1.0	V
DET Out, H Voltage	V_{DH}		4.8	5.0		V
DET Out, L Voltage	V_{DL}	SW1 off		0.1	0.3	V
Comparator Threshold H Voltage	V_{TH}	SW2-a	2.7	2.95	3.2	V
Comparator Threshold L Voltage	V_{TL}	SW2-a	2.4	2.7	3.0	V
Threshold Width	V_{TW}	V_{TH}-V_{TL}	0.10	0.22	0.40	V
DET Operating Current, H	I_{DH}	SW2-b	40	65	90	μA
DET Operating Current, L	I_{DL}	SW2-b	40	65	90	μA

Block Diagram



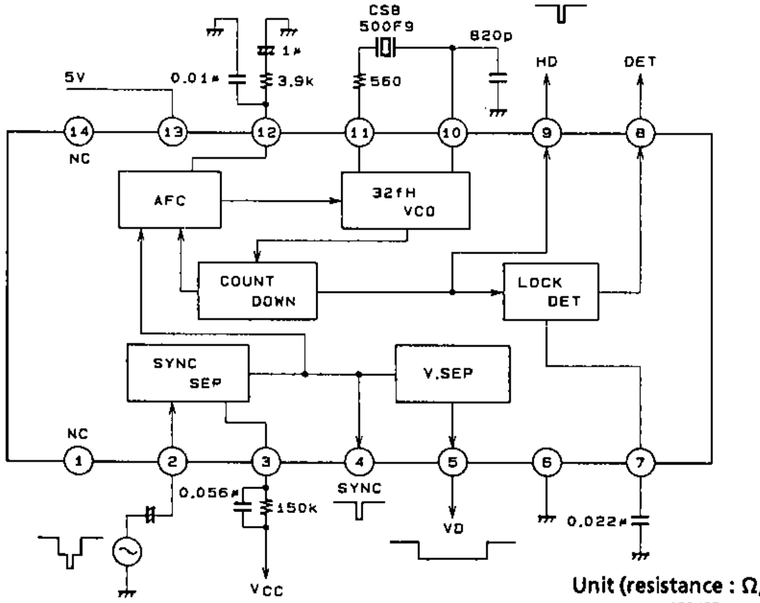
Test Circuit



Unit (resistance : Ω, capacitance : F)

A00488

Typical Application



Unit (resistance : Ω, capacitance : F)

A00489

- DET OUT becomes H upon lock
- When feeding video signal to the input pin directly, keep DC level between 2 and 3.5 volts.
- Standard video input is 1 Vp-p

This catalog provides information as of **December, 1996.** Specifications and information herein are subject to change without notice.